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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,185	02/14/2001	Arlie R. Conner	1266-033	7802

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IPSOLON LLP
805 SW BROADWAY, #2740
PORTLAND, OR 97205

EXAMINER

CURTIS, CRAIG

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 01/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,185

Applicant(s)

CONNER

Examiner

Craig Curtis

Art Unit

2872

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 14, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION
Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- I. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakanishi et al. (5,760,850).

With regard to claim 1-3, Nakanishi et al. disclose the invention as claimed--A color filter, comprising: a refractive lens array (Fig. 6, lens array 5) for receiving and focusing diverging color components of light and a holographic grating (Id. 12) for aligning the color components of light along distinct, non-diverging paths (see principal rays; col. 12, lns. 53-59); in which the holographic grating aligns the distinct color components of light to be normal to a selected plane (e.g., plane 40 in Fig. 8), said selected plane corresponding to an electronic display panel (Fig. 8, 40).

With regard to claims 12 and 15, Nakanishi et al. teach said focusing element (Fig. 7, focusing element 5), and said diffractive color dispersing layer (holographic optical element 7 in Fig. 7) positioned between the focusing element and the imaging plane for aligning the color components of light along distinct, non-diverging paths normal to said imaging plane.

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With regard to claims 20-24, noting that the adjective telecentric refers to optical systems in which the entrance pupil and/or the exit pupil is located at infinity, and thus principal rays of the system are parallel to the optical axis of the system, Nakanishi et al. teach a telecentric color filtering method for providing telecentric color-filtered light to an imaging plane, comprising:

forming plural diverging color light components (see above); and directing the plural diverging color light components through a holographic grating to align the color light components along distinct, non-diverging paths that are telecentric with respect to the imaging plane (see principal rays in Fig. 7).

With regard to claim 18, said imaging plane is a transmissive type electronic display panel with pixel apertures in a stripe formation (see Fig. 6, in which beams pass through pixels).

With regard to claims 4 and 14, Nakanishi et al. teach wherein said lens array/focusing element includes an array of/plural cylindrical lenses (see Fig. 7, cylindrical in cross section into the page); with regard to claim 13, Nakanishi et al. teach wherein the focusing element includes a microlens array (element 5: see col. 10, ln. 5).

With regard to claims 5 and 17, noting that optical power refers exclusively to refractive, as opposed to diffractive, effects, said holographic grating is continuous and without optical power, and said diffractive color dispersing layer is isotropic and without optical power.

With regard to claims 6 and 16, said holographic grating and said diffractive color dispersing layer each include a volumetric hologram (col. 10, lns. 45-67--col. 11, lns. 1-61)

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With regard to claims 7 and 19, said color divergence elements (the outermost portion of lens array 5 and hologram 7) provide, respectively, diverging color components of light to said refractive lens array and to said focusing element.

With regard to claim 8, the color divergence element includes plural angularly inclined dichroic mirrors (Fig. 1, dichroic mirrors 4R, 4G, 4B: col. 9, lns. 36-4) for providing color separation of incident multi-color illumination light.

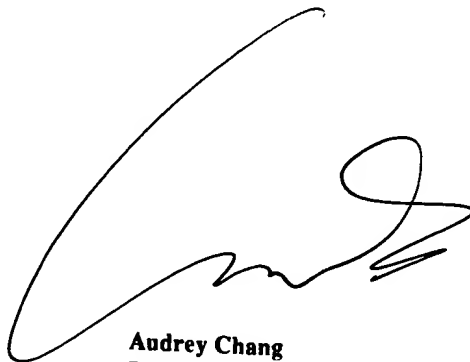
With regard to claims 9 and 10, the color divergence element includes a holographic grating (7) for providing color separation of incident multi-color illumination light and is substantially the same as the holographic grating for aligning the color components of light (7 is substantially the same as hologram 8).

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Contact Information

2. Any inquiry concerning this or earlier communications from the examiner should be directed to Craig Curtis, whose telephone number is (703) 305-0776. The facsimile phone number for Art Unit 2872 is (703) 308-7721.

Any inquiry of a general nature regarding the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0956.



**Audrey Chang
Primary Examiner
Technology Center 2800**



**Craig H. Curtis
Group Art Unit 2872
23 January 2002**